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EXAMINER

HASSAN, AURANGZEB

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### *Claim Objections*

1. Claims 1, 23, 25 and 30 are objected to because of the following informalities:  
  
claim 1 -page 4, line 3 states “interruption *even*”; line 4 states “button is operated”,  
  
claim 23 – page 6, line 6 states “interruption *even*”; lines 7 & 8 state “button is operated”,  
  
claim 25 – page 8. lines 6 & 7 state “button is operated”,  
  
claim 30 – page 10. line 6 states “button is operated”.

The Examiner suggests changing all of the *even*’s to “event” and modifying the *button is operated* to “*button which is operated*”.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 23 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 23 recites the limitations "the review display button" in line 5, "the print setting button" in line 9, "the preview display button" in line 10, and "the print instruction button" in line 21. There is insufficient antecedent basis for these limitations in the claim.

5. Claim 30 recites the limitations "the review display button" in line 5, "the print setting button" in line 9, "the preview display button" in line 10, "generating the print instruction" in line 17, and "the print instruction button" in line 20. There is insufficient antecedent basis for these limitations in the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5, 20 – 22 and 25 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusawa et al. (US Publication Number 2003/0085942 hereinafter "Narusawa") in view of Leslie (US Publication Number 2003/0142325) further in view of Kitamura et al. (US Patent Number 6,947,158, hereinafter "Kitamura").

8. As per claims 1 and 25, Narusawa teaches a print system and method, in which a printer (printer 1, figure 1) and a host computer (paragraph [0085]), each of which includes a communication interface for transmitting and receiving information in real time (communication via interface 29, figure 2); are connected to each other to communicated with each other, comprising:

the printer comprising:

a read-out unit (13, figure 1) for reading out image data from a recording medium for recording the image data (reads image data from detachable recording medium);

an operation panel including a plurality of operation members (user interface, figure 5), each for receiving an instruction from a user, wherein the plurality of operation members includes at a print instruction button, a preview display button and a print setting button (figure 7 shows the panel in operation, paragraph [0091 & 0120-0121]);

a printer engine (28, figure 2) for performing printing (paragraph [0084]),

an operation panel controller for effecting control so as to cause the printer engine to print image data read out from the detachable recording medium of the printer if the print instruction button is operated by the user without operating the preview display button (paragraphs [0083-0084]), and if one of the print instruction button and the print setting button is operated by the user subsequently to operation of the preview display button (paragraphs [0083-0084 & 0094-0096]) interruption event to transmit (interrupt generation, paragraph [0083]), and transmitting the print setting information (paragraph [0086]).

Narusawa teaches an embodiment of a stand-alone printer in which an interrupt is generated and transmitted within the printer and printer controller however does not explicitly describe notifying a host computer of the interrupt event. However it would have been obvious to one of ordinary skill in the art to utilize the printer of Narusawa with a host computer via the communication interface (host computer can be connected via interface 29, figure 2, paragraph [0085]), therein the host computer receiving a notification of an interrupt event from the printer. One of ordinary skill in the art would be motivated to make such modification in order to have increased flexibility in data printing (paragraphs [0003, 0004 & 0085]).

Narusawa does not explicitly disclose a transmission unit in the printer and the details of the functionality of the host computer.

Leslie teaches a printer communicating with a host computer wherein,  
the printer (14, figure 1) comprises:

a transmission unit for transmitting the image data which is read out by the read-out unit (transmission unit carries out step 74 to 76 in transmitting the print setting to the host computer, paragraph [0041]); and

the host computer (12, figure 1) comprising:

an interruption controller for, in response to the preview display button being operated, detecting the interruption even transmitted by the printer (host computer utilizes built-in controller to recognize the transmission of data from the printer, 18, figure 1);

receiving unit for receiving, from the printer the print setting information generated by the printer and the image data read out from the detachable recording medium of the printer (image data read out from medium incorporated from Narusawa paragraph [0091]), if the interruption controller detects the interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently (in response to the interrupt and transmitted data, host computer receives print image data, paragraph [0041]); and

display control unit (16, figure 1) for causing a display apparatus to effect a print preview display on the basis of print setting information and image data received by the receiving unit (host displays print setting on 16a, figure 1, paragraphs [0041 - 0042]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to enhance the print preview function of Narusawa with the image updates on the host display of Leslie. One of ordinary skill would be motivated to make such modification in order to enhance a true depiction of data printing (paragraph [0012]).

The combination of Narusawa and Leslie does not explicitly disclose a print instruction generation unit in a host computer.

Kitamura teaches a print instruction generation unit for generating the print instruction including print image data and transmitting the generated print instruction to the printer (preview is displayed, figure 3), if the interruption controller (printer driver 21, figure 2, determines interrupts in light of Narusawa and Leslie) detects the interruption event which is generated and transmitted by the printer in accordance with the print

instruction button (element 34, operation panel with buttons, figure 3) which is operated subsequently to the operation of the preview display button (column 4, lines 16 - 35).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Narusawa/Leslie with the above teachings of Kitamura. One of ordinary skill would be motivated to make such modification in order to enhance user flexibility in a printing system (column 1, lines 57 – 63).

The Examiner makes a note to the Applicant that Narusawa teaches an interrupt controller for detecting print settings on the printer along with a display which responds with a preview of the settings established by the user in the embodiment of a digital camera as seen in figure 12. Narusawa states that a computer, mobile telephone and portable remote terminals also have all of the same functionality as described for the digital camera (paragraphs [0085 & 0126]).

9. As per claims 5 and 26, Narusawa teaches a print system and method, wherein the printer includes a direct print controller for effecting printing not through the computer so that printing is executable with the printer alone (stand-alone printer, paragraph [0078]).

10. As per claims 20 and 27, Narusawa teaches a print system and method, wherein the host computer further comprises a generating unit for receiving image data read out from a detachable memory card of the printer (memory card 2 is detachable to card slot



13, figure 1), and generating print data corresponding to the print setting information, from the received image data (paragraph [0118]).

11. As per claims 21 and 28, Narusawa teaches a print system and method, wherein at every interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of the preview display button, the display control unit causes the display apparatus to effect the print preview display in which the print setting information changed at every interruption event is reflected (user pushes various buttons and the selected print-condition setting file is effected, figure 14, paragraph [0118]).

12. As per claims 22 and 29, Narusawa teaches a print system and method, wherein the printer starts printing on the basis of the print instruction transmitted by the host computer when the host computer receives the interruption event corresponding to an operation of the print button of the operational panel (paragraphs [0120-0121]).

13. As per claims 32 and 34, Narusawa/Leslie teaches a system and method wherein the print system is arranged so that in a case where the host computer effects the print preview display, the host computer generates print data and the printer receives the print data generated by the host computer and prints the generated print data (step 68, result of "YES" figure 5), and in case where the host computer does not

effect the print preview display, the printer generates print data and prints the print data generated thereby (step 68, result of "NO" figure 5).

14. Claims 23, 24, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusawa in view of Kitamura.

15. As per claims 23 and 30, Narusawa teaches a print system and method, in which a printer (figure 1) and a host (element 3, figure 12), each of which includes a communication interface for transmitting and receiving information in real time (USB figure 12), are connected to each other to communicate with each other, the host comprising:

- a detecting unit for, responsive to the preview display button, detecting an interruption event generated and transmitted by the printer (interrupt generation, paragraph [0083, 0091, 0120 & 0121] in communication with host [0085], figure 5);

- a receiving unit for receiving image data read out by the printed from a detachable memory card, if the detection unit detects the interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of the preview display button (paragraphs [0090-0092]);

- print preview display control unit for (element 139, figure 13), in response to the detection of the interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of

the preview display button, obtaining a print setting generated by the printer when the print setting button is operated (setting from panel save in memory card, paragraph [0118]) and controlling a display apparatus of the host to effect a print preview display by applying the obtained print setting to the received image data so that the print setting is reflected therein (figure 15).

Narusawa does not explicitly disclose the functionality of the host is comprised in the host computer, however does say that the host can be a host computer interchangeably with full functionality (paragraphs [0085 & 0126]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize the host computer environment or the digital camera environment interchangeably as taught by Narusawa (paragraphs [0085 & 0126]). One of ordinary skill would be motivated to utilize such environment to accommodate a user-friendly interface (paragraph [0009]).

Narusawa does not explicitly disclose a print instruction print preview generation unit in a host computer.

Kitamura teaches a print instruction generation unit for generating a print instruction including print image data and transmitting the generated print instruction to the printer so that the printer effects printing on the basis of the print instruction (preview is displayed, figure 3), if the detecting unit (printer driver 21, figure 2, determines interrupts in light of Narusawa and Leslie) detects the interruption event which is generated and transmitted by the printer in accordance with the print instruction button

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(element 34, operation panel with buttons, figure 3) which is operated subsequently to the operation of the preview display button (column 4, lines 16 - 35).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Narusawa with the above teachings of Kitamura. One of ordinary skill would be motivated to make such modification in order to enhance user flexibility in a printing system (column 1, lines 57 – 63).

16. As per claims 24 and 31, Narusawa teaches a print system and method, wherein the print preview display control unit updates the print preview display every time the print setting is changed in accordance with the operation of the print setting button (selected print condition is effected, paragraphs [0118-0119]).

17 As per claims 33 and 35, Narusawa/Leslie teaches a system and method wherein the print system is arranged so that in a case where the host computer effects the print preview display, the host computer generates print data and the printer receives the print data generated by the host computer and prints the generated print data (step 68, result of “YES” figure 5), and in case where the host computer does not effect the print preview display, the printer generates print data and prints the print data generated thereby (step 68, result of “NO” figure 5).

### ***Response to Arguments***

18. Applicant's arguments with respect to claims 1, 5, 20 – 35 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant argues claim limitations of certain buttons having functionality when utilized with or without direct user input as well as a newly amended generation unit which has been rejected in light of Kitamura. All of the applicant's arguments pertain to newly amended claims thus the arguments are moot in view of the newly cited prior art.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Publication Number 2005/0275872 teaches a printer with a memory card reader integrated on the surface of the printer further coupled to a computer. The system allows for data enhancement of images stored on the card and the Examiner further cites the functionality of an operating system and the print preview functionality inherited therein. Operating systems further include drivers to handle and process interrupts from devices that are connected to the computer. The Examiner also makes US Publication Number 2002/0054350 of record as pertinent prior art as it teaches a printer with memory card and stand-alone capabilities as well as functionality of being coupled with a computer. As well as copending application US Publication Number 2004/0080778 which teaches all of the components of the current application with the variation of the operational panel being external of the printer.

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AURANGZEB HASSAN whose telephone number is (571)272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571)272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH

/Tariq Hafiz/  
Supervisory Patent Examiner, Art Unit 2182